Willie E. May

BIOGRAPHICAL SKETCH

Willie E. May received his B.S. degree in chemistry from Knoxville College, Knoxville, TN in 1968 and his Ph.D. in analytical chemistry from the University of Maryland at College Park, MD in 1977. He was employed at the Oak Ridge Gaseous Diffusion Plant from 1968-1971. He has been employed in the Center for Analytical Chemistry at the National Bureau of Standards since 1971. He became Group Leader for Liquid Chromatography, Organic Analytical Research Division 1976 and became Chief of the Division in 1983. In 1994, Dr. May became Chief of the Analytical Chemistry (a combination of the Organic Analytical and Inorganic Analytical Chemistry Divisions). Dr. May is the author of more than 80 technical articles and book chapters and has presented more than 100 invited lectures at technical meetings and symposia

PRESENT POSITION

Chief, Analytical Chemistry Division , Chemical Science and Technology Laboratory, National Institute of Standards and Technology. Division resources include a technical staff of approximately 100 and an administrative and support staff of 7. Scientists in the Division are involved in research and measurement service activities related to:

- Atomic and Molecular Spectroscopy
- Analytical Mass Spectrometry
- Analytical Separation Science
- Nuclear Analytical Methods
- Classical and Electroanalytical Methods
- Gas Metrology
- Laboratory Automation Technology
- Microfluidic Methods for Miniaturization of Analytical Measurement Systems

Responsible for planning, directing, coordinating, and administering the technical programs of the Division in: the performance of experimental and theoretical research in analytical chemistry to provide a scientific base for chemical measurement technology; development of measurement methods and identification techniques for the chemical characterization of materials, and samples of environmental, food/nutritional and chemical process interest to meet the needs of industry, Government, and the public; development of standard procedures, calibration data, and reference materials in cooperation with national and international standards organizations; and contributing to U. S. economic growth and international competitiveness both through measurement quality assurance and technology transfer interactions and collaborations with U. S. industry.

Education

Ph.D., Analytical Chemistry, University of Maryland (1977)
B.S., Chemistry, Knoxville College (1968)

Employment History

1994-present	Chief, Analytical Chemistry Division, National Institute of Standards & Technology
1983-1994	Chief, Organic Analytical Research Division, National Institute of Standards & Technology
1978-1983	Liquid Chromatography Group Leader, Organic Analytical Research Division, National Bureau of Standards
1971-1978	Research Chemist, Center for Analytical Chemistry, National Bureau of Standards
1968-1971	Senior Lab Analyst, Oak Ridge Gaseous Diffusion Plant

Memberships

- American Chemical Society; Chair, Minority Affairs Council-Committee 1995-1998; President's Blue Ribbon Panel on Minority Affairs (1994-)
- International Society for Polycyclic Aromatic Compounds; Executive Board Member/Past President
- Ford Foundation Predoctoral Fellowship Evaluation Board; Chair, Physical Sciences Panel 1992-1996
- Federal Interagency Coordinating Committee for National Human Exposure Assessment Survey
- North American Metrology Collaboration (NORAMET); Rapporteur for Chemical Metrology, '95-'98
- Chair, Chemistry Panel, Texas Higher Education Coordinating Board, 1995
- National Environmental laboratory Accreditation Conference.
- Consultative Committee on the Quantity of Material, International Treaty of the Meter Convention; Chair, Organic Analysis Working Group
- North American Metrology Cooperation (NORAMET)—NIST Representative to Technical Committee
- Interamerican System for Metrology (SIM); Chair, Chemical Metrology Working Group
- NASA Administrator's Fellowship Program, Member Review Panel

- Peer Review Panel for the Institute for National Measurement Standards, Canadian National Research Council; Chair, Chemical Metrology Subpanel (January, 1999)

Recognition

Department of Commerce Bronze Medal, December 1981
National Bureau of Standards EEO Award; November 1982 and December 1993
Department of Commerce Silver Medal, November 1985
Profiled in American Men and Women of Science (1986-present)
Arthur S. Flemming Award for Outstanding Federal Service, May 1987
Member of Federal Government Senior Executive Service (1987-present)
Percy Julian Award, NOBCChE, April 1992
Presidential Rank of Meritorious Executive in Federal Service, October 1992
Department of Commerce Gold Medal, November 1992

Personal Research Interests

Dr. May's personal research activities were focussed in the area of trace organic analytical chemistry, with special emphasis on the development of liquid chromatographic methods for the determination of individual organic species in complex mixtures (i.e., extracts of environmental, food, and clinical samples) and the development of liquid chromatographic methods for the determination of physico-chemical properties such as aqueous solubilities, octanol/water partition coefficients, and vapor pressures of organic compounds.

Publications and Invited Talks

- More than 75 publications in peer-reviewed technical journals
- More than 100 invited technical talks including the following 12 examples from the recent past:

Establishment of an Environmental Reference Materials Traceability Program Through Government-Private Sector Partnership, The Semi-Annual Meeting of the Chemical Reference Materials Manufacturers Association, Chicago, IL, March 3, 1996.

Chemical Measurement Systems for Establishing Traceability to NIST, J. K. Taylor Memorial Workshop, Pittsburgh Conference '96, Chicago, IL, March 4, 1996.

NIST Activities in Support of Accuracy, Traceability and Comparability in Chemical Measurement Systems, Symposium on Global Traceability and Quality of Chemical Measurement, Pittsburgh Conference '96, Chicago, IL, March 5, 1996.

NIST Research and Service Activities in Chemical Metrology, U.S.-Egypt Bilateral Workshop on Metrology, Standards and Conformity Assessment, Alexandria, Egypt, June 9, 1996.

Chemical Science and Technology at NIST for the 21st Century: Role of the Analytical Chemistry Division, Symposium on Analytical Chemistry: A Twenty-Year View of A Half-Centurian, Baton Rouge, LA, July 19, 1996.
NIST Activities in Support of Accuracy, Traceability, and Comparability in Chemical Measurement Systems, Highlands in Chemistry Seminar Series, Virginia Polytechnical University, Blacksburg, VA, February 14, 1997.

The Role and Availability of Reference Materials for Measurement Quality and Data Comparability, Pittsburgh Conference, Atlanta, GA, March 19, 1997.

National Traceability and International Comparability of Chemical Measurements: NIST Role, Pittsburgh Conference, Atlanta, GA, March 20, 1997.

The Role and Availability of NIST Reference Materials for Assuring Measurement Quality and Data Comparability, National Metrology Week, Pretoria, South Africa, August 27-28, 1997.

Reference Materials and Their Impact on World Trade, Workshop on "Chemical Metrology: A New Challenge for the Americas,? Rio de Janeiro, Brazil , November 3, 1997.

How to Establish a Chemical Metrology Program, INTI, Buenos Aires, Argentina, November 5, 1997.

NIST Role in Providing National Traceability and International Comparability for Chemical Measurements, Bundesanstalt fur

Materialforschung und -pufung, Berlin, Germany, February 17, 1998.